

COMBINATION SELF-EXPANDABLE,
BALLOON-EXPANDABLE ENDOLUMINAL STENT

ABSTRACT

5 An endoluminal device, such as a stent or a vena cava filter, comprising at
least one superelastic section and at least one plastically deformable section. The superelastic
section may comprise, for example, a superelastic grade of nitinol, whereas the plastically
deformable section may comprise, for example, gold, platinum, tantalum, titanium, stainless
steel, tungsten, a nickel alloy, a cobalt alloy, a titanium alloy, or a combination thereof.
Each plastically deformable section may merely comprise a constrained portion of the
10 superelastic section comprising a plastically deformable material, such as gold. The device
enables deployment by a method comprising introducing the device into a body lumen with
the device radially constrained in a first configuration having a first diameter; allowing the
device to self-expand into a second configuration having a second diameter less than or equal
to a fully-self-expanded diameter; and then optionally "fine-tuning" the device by forcibly
expanding the device into a third configuration having a third diameter in a range between
the second diameter and less than or equal to a fully-forcibly-expanded diameter. The
superelastic and plastically deformable sections may be tubular sections placed end-to-end,
such that the plastically deformable section can be conformed to fit a tapered section of a
lumen.